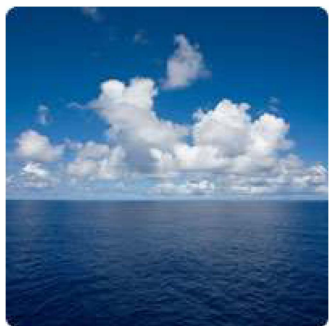


Climate could warm to record levels in 2010

10 December 2009



A combination of man-made global warming and a moderate warming of the tropical Pacific Ocean, a phenomenon known as El Niño, means it is very likely that 2010 will be a warmer year globally than 2009.

Recently released figures confirm that 2009 is expected to be the fifth-warmest year in the instrumental record that dates back to 1850.

The latest forecast from our climate scientists, shows the global temperature is forecast to be almost 0.6 °C above the 1961–90 long-term average. This means that it is more likely than not that 2010 will be the warmest year in the instrumental record, beating the previous record year which was 1998.

A record warm year in 2010 is not a certainty, especially if the current El Niño was to unexpectedly decline rapidly near the start of 2010, or if there was a large volcanic eruption. We will review the forecast during 2010 as observation data become available.

Looking further ahead, our experimental decadal forecast confirms previous indications that about half the years 2010–2019 will be warmer than the warmest year observed so far — 1998.

Background information

- The 1961–90 global average mean temperature is 14.0 °C.
- Global temperature for 2010 is expected to be 14.58 °C, the warmest on record.
- The warmest year on record is 1998, which reached 14.52 °C, was a year dominated by an extreme El Niño
- Over the ten years, 2000–2009, since the Met Office has issued forecasts of annual global temperature, the mean value of the forecast error is 0.06 °C.
- Interannual variations of global surface temperature are strongly affected by the warming influences of El Niño and the cooling influences of La Niña in the Pacific Ocean. 2009, with a provisionally observed temperature of 14.44 °C, can be compared with the identical forecast value of 14.44 °C.

The Met Office, in collaboration with the University of East Anglia, maintains a global temperature record which is used in the reports of the Intergovernmental Panel on Climate Change.

Each December or January the Met Office, in conjunction with the University of East Anglia, issues a forecast of the global surface temperature for the coming year. The forecast takes into account known contributing factors, such as El Niño and La Niña, increasing greenhouse gas concentrations, the cooling influences of industrial aerosol particles, solar effects, volcanic cooling effects if known, and natural variations of the oceans.

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